

Attorney's Docket No.: 07977/208001/US3511

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

Claims 1, 3, 4, 13, 16, 17, 19, 20, 21, and 22 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Mizutani. In response, claims 1, 3, 4, and 13 have been canceled herein. The rejection of the remaining claims is respectfully traversed.

Rejected claim 19 defines a semiconductor device that includes a charge coupled device. Claim 19 requires that the charge coupled device includes a crystalline semiconductor film that is formed on the insulating surface. This crystalline semiconductor film has a plurality of crystals extending in a crystal growth direction. The charge transfer direction is coincident with the crystal growth direction.

In contrast, the device described in Mizutani does not include a charge coupled device as recited by rejected claim 19. Although Mizutani refers to their device as being a "CCD" in column 1, line 15, this is merely a statement about the prior art. There is no teaching or suggestion in Mizutani that the device of Mizutani includes a charge coupled device. Therefore, it is respectfully suggested that the rejection of claim 19 based on 35 U.S.C. 102(b) is not correct for these reasons.

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The rejection also states that Mizutani teaches the charge transfer direction being coincident with the crystal growth direction. This contention is again respectfully traversed. The allegation is based on column 3, lines 13-20 of Mizutani, which is reproduced below.

"Also the monocrystalline silicon may be obtained by recrystallization with laser annealing or by monocrystal growth from a seed composed of a small  $\text{SiH}_4$  pattern on  $\text{SiO}_2$  followed by flattening. The large-grain polycrystalline silicon is most suitable for the present embodiment, due to the ease of the forming process. The large-grain polycrystalline silicon will be detailedly explained later."

However, this paragraph does not discuss the relationship between the crystal growth direction and the charge transfer direction. For these reasons, it is respectfully suggested that claim 19 should be allowable along with the dependent claims which depend therefrom.

Claim 16 has been amended to recite that the device includes a charge coupled device (CCD). Therefore, the rejection of this claim has been obviated by these amendments which are made herein.

Paragraph 11 of the Action rejects claim 2, 5, 6, 11, 12, 14, and 23 under 35 U.S.C. 103(a) as allegedly being unpatentable over Mizutani in view of Funakoshi. This contention is respectfully traversed. As stated above, Mizutani does not include a charge coupled device. Furthermore, Mizutani teaches away from the use of a charge coupled device in its

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description at column 1, lines 15-25. Moreover, there is no suggestion or motivation to combine Mizutani with Funakoshi. Also importantly, Mizutani does not teach or suggest that the charge transfer direction of at least one of the vertical and horizontal charge coupled devices is coincident with the crystal growth direction as explained above. Therefore, even if these references were combined, the combined teaching does not teach or suggest the feature defined in claim 2.

New claims are also added herein, and these claims should be allowable for similar reasons to those discussed above.

An Information Disclosure Statement is also concurrently being filed via mail.

In view of the above amendments and remarks, therefore, all of the claims should be in condition for allowance. A formal notice to that effect is respectfully solicited.

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Respectfully submitted,

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VERSION TO SHOW CHANGES MADEIn the Claims:

Claims 1, 3, 4, and 13 have been canceled.

Claim 16 has been amended as follows.

16. (Amended) A semiconductor device including a CCD, said CCD comprising:

a crystalline semiconductor film [being] formed on an insulating surface, said crystalline semiconductor film having a plurality of crystals extending in a crystal growth direction which is parallel to the insulating surface;

an insulating film on the crystalline semiconductor film;

a plurality of electrodes [being] formed on the insulating film, each of said plurality of electrodes [being] located within a predetermined distance so that a plurality of MOS capacitors are formed between the plurality of electrodes and the crystalline semiconductor film with the insulating film therebetween,

wherein a charge is transferred from one of the MOS capacitors to another of the MOS capacitors in a charge transfer direction,

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wherein a crystal structure of the crystalline semiconductor film is continuous so that the crystal structure is regarded as single crystal for the charge,

wherein the charge transfer direction is coincident with said crystal growth direction.

New claims 24, 25, and 26 have been added.